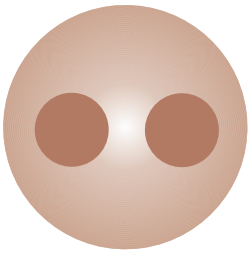
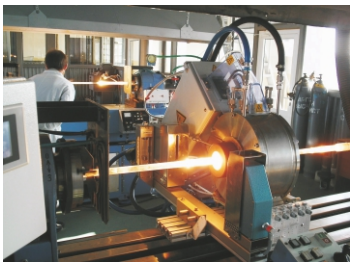
Polarization Maintaining Fiber for Gyro and Telecom Applications

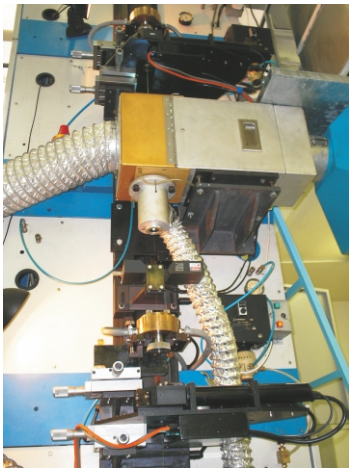
Optolink's PANDA-type polarization maintaining (PM) fiber design uses two stress-applying parts to create high birefringence, resulting in fibers with excellent polarization maintaining properties.



Optolink's PM fibers have high birefringence and exceptionally tight dimensional specifications, critical for manufacturing high precision high-performance gyro coils. The Panda-type configuration is preferred over bow-tie or elliptical clad designs because of its advantages in process scalability and product uniformity. These fibers are available for operation at 830, 1300 and 1550 nm wavelengths.

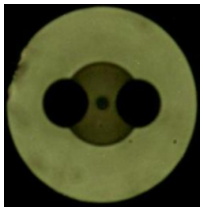
Operational wavelength, μm	0.83	1.55
Mode Field Diameter, μm	4.5	6.5
Cladding Diameter, μm	80	80-125
Coating Diameter, μm	160-175	160-175
Numerical Aperture	0.15	0.13
Polarization crosstalk (h-parameter), m^{-1}	$< 10^{-5}$	$< 10^{-5}$
Attenuation, dB/km	< 3	< 2
Cutoff Wavelength, nm	730–800	1300–1450
Beat Length, mm	< 3	< 3
Stress Type	PANDA	PANDA

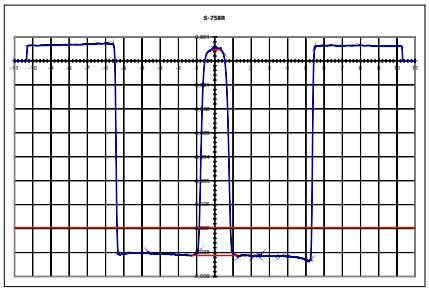




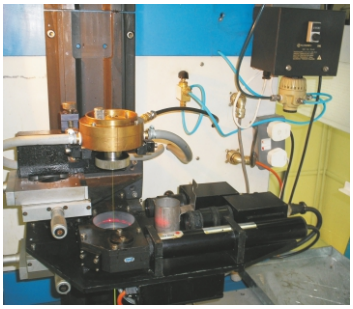
Radiation-hard SM and PM fibers

Pure silica core and depressed fluorine-doped silica cladding





Refractive index profile



Fiber components

Fiber depolarizer

Optical power loss, dB	< 0.5
Residual light polarization, %	< 0.1

Fiber splitters

Power splitting ratio	0.49 / 0.51
Insertion loss, dB	0.1

OPTOLINK

From optical components to navigation systems

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